

What is claimed is:

1. A method of identifying a renal protective agent, the method comprising:
  - (a) providing a test cell population comprising a cell capable of expressing one or more nucleic acid sequences selected from the group consisting of RPF 1-104;
  - (b) contacting the test cell population with a test agent;
  - (c) measuring expression of one or more of the nucleic acid sequences in the test cell population;
  - (d) comparing the expression of the nucleic acid sequences in the test cell population to the expression of the nucleic acid sequences in a reference cell population comprising at least one cell whose renal status is known; and
  - (e) identifying a difference in expression levels of the RPF sequence, if present, in the test cell population and reference cell population, thereby identifying a renal protective agent.
2. The method of claim 1, wherein the method comprises comparing the expression of one or more genes selected from the group consisting of RPF 3-32 and 103-104.
3. The method of claim 1, wherein the method comprises comparing the expression of one or more genes selected from the group consisting of RPF 3-23.
4. The method of claim 3, wherein the expression of the nucleic acid sequences in the test cell population is increased as compared to the reference cell population.

5. The method of claim 2, wherein the expression of the nucleic acid sequences in the test cell population is decreased as compared to the reference cell population.

6. The method of claim 1, wherein the test cell population is provided *in vitro*.

7. The method of claim 1, wherein the test cell population is provided *ex vivo* from a mammalian subject.

8. The method of claim 1, wherein the test cell population is provided *in vivo* in a mammalian subject.

9. The method of claim 1, wherein the test cell population is derived from a human or rodent subject.

10. The method of claim 1, wherein the test cell population includes a kidney cell.

11. The method of claim 10, wherein said test cell population is selected from the group consisting of mesangial cells, endothelial cells, glomerular cells, renal epithelial cells, embryonic kidney cells, and renal tubular cells.

12. The method of claim 1, wherein the method comprises comparing the expression of five or more of the nucleic acid sequences.

13. The method of claim 1, wherein the method comprises comparing the expression of 20 or more of the nucleic acid sequences.

14. The method of claim 1, wherein the method comprises comparing the expression of 25 or more of the nucleic acid sequences.

15. A method of screening a test agent for renal toxicity, the method comprising:

- (a) providing a test cell population comprising a cell capable of expressing one or more nucleic acid sequences selected from the group consisting of RPF 1-104;
- (b) contacting the test cell population with a test agent;
- (c) measuring expression of one or more of the nucleic acid sequences in the test cell population;
- (d) comparing the expression of the nucleic acid sequences in the test cell population to the expression of the nucleic acid sequences in a reference cell population comprising at least one cell whose renal toxic agent expression status is known; and
  - (e) identifying a difference in expression levels of the RPF sequence, if present, in the test cell population and reference cell population, thereby screening said test agent for renal toxicity.

16. A method of diagnosing or determining the susceptibility to renal injury in a subject, the method comprising:

- (a) providing from the subject a test cell population comprising a cell capable of expressing one or more nucleic acid sequences selected from the group consisting of RPF 1-104;
- (b) contacting the test cell population with a test agent, said agent being capable of altering expression of one or more of the nucleic acid sequences in the test cell population which are altered during renal injury;

(c) measuring the expression of one or more of the nucleic acid sequences in the test cell population;

(d) comparing the expression of the nucleic acid sequences in the test cell population to the expression of the nucleic acid sequences in a reference cell population comprising at least one cell whose renal injury agent expression status is known; and

(e) identifying a difference in expression levels of the RPF sequence, if present, in the test cell population and reference cell population,

thereby diagnosing or determining the susceptibility to renal injury in the subject.

17. The method of claim 16, wherein said renal injury is selected from the group consisting of ischemic kidney injury, renal transplantation, drug toxicity, cancer, diabetes, hypertension, childhood lupus nephritis, and polycystic kidney disease.

18. A method of assessing the renal protective effect of a test agent in a subject, the method comprising:

- (a) providing from the subject a test cell population comprising a cell capable of expressing one or more nucleic acid sequences selected from the group consisting of RPF 1-104;
- (b) contacting the test cell population with a test agent;
- (c) measuring expression of one or more of the nucleic acid sequences in the test cell population; and
- (d) comparing the expression of the nucleic acid sequences in the test cell population to the expression of the nucleic acid sequences in a reference cell population comprising at least one cell whose renal injury agent expression status is known;

(e) identifying a difference in expression levels of the nucleic acid sequences, if present, in the test cell population and the reference cell population, thereby assessing the renal protective effect of the test agent in the subject.

19. The method of claim 18, wherein the method comprises comparing the expression of one or more genes selected from the group consisting of RPF 3-32 and 103-104.
20. The method of claim 18, wherein the method comprises comparing the expression of one or more genes selected from the group consisting of RPF 3-23 and 103-104.
21. The method of claim 20, wherein the expression of the nucleic acid sequences in the test cell population is increased as compared to the reference cell population.
22. The method of claim 19, wherein the expression of the nucleic acid sequences in the test cell population is decreased as compared to the reference cell population.
23. The method of claim 18, wherein said subject is a human or rodent.
24. The method of claim 18, wherein the test cell population is provided *ex vivo* from said subject.
25. The method of claim 18, wherein the test cell population is provided *in vivo* from said subject.

26. A method of assessing the renal toxicity of a test agent in a subject, the method comprising:

- (a) providing from the subject a test cell population comprising a cell capable of expressing one or more nucleic acid sequences selected from the group consisting of RPF 1-104;
- (b) contacting the test cell population with a test agent;
- (c) measuring expression of one or more of the nucleic acid sequences in the test cell population; and
- (d) comparing the expression of the nucleic acid sequences in the test cell population to the expression of the nucleic acid sequences in a reference cell population comprising at least one cell whose renal toxic agent expression status to a renal toxic agent is known;
- (e) identifying a difference in expression levels of the nucleic acid sequences, if present, in the test cell population and the reference cell population,

thereby assessing the renal toxicity of the test agent in the subject.

27. A method of treating a renal related disorder in a subject, said method comprising administering to a subject in need thereof a therapeutically effective amount of a compound which modulates RPF expression or activity in said subject, thereby treating said renal disorder in said subject.

28. The method of claim 27, wherein said renal disorder is selected from the group consisting of ischemic kidney injury, renal transplantation, drug toxicity, cancer, diabetes, hypertension, childhood lupus nephritis, and polycystic kidney disease.

29. The method of claim 27, wherein the compound is a RPF polypeptide, a nucleic acid encoding a RPF polypeptide, or a nucleic acid that modulates the expression of a nucleic acid that encodes a RPF polypeptide.

30. The method of claim 27, wherein said subject is a human or rodent.

31. The method of claim 27, wherein said compound increases RPF expression or activity.

32. The method of claim 27, wherein said compound decrease RPF expression or activity.

33. An isolated nucleic acid comprising a nucleic acid sequence selected from the group consisting of a SEQ ID NO. 1 and SEQ ID NO. 3 nucleic acid, or its complement.

34. A vector comprising the nucleic acid of claim 33.

35. A cell comprising the vector of claim 34.

36. A pharmaceutical composition comprising the nucleic acid of claim 33.

37. A polypeptide encoded by the nucleic acid of claim 33.

38. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO.2.
39. A kit which detects two or more of the nucleic acid sequences selected from the group consisting of RPF 1-104.
40. An array which detects one or more of the nucleic acids selected from the group consisting of RPF 1-104.
41. A plurality of nucleic acids comprising one or more of the nucleic acids selected from the group consisting of RPF 1-104.